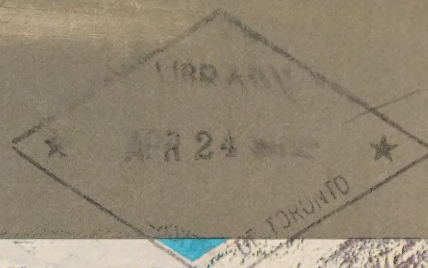


# FACTS ON CANADA

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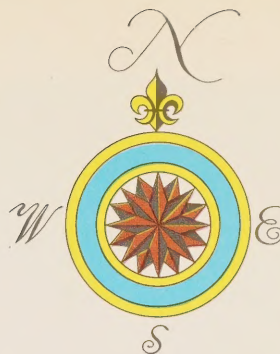
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Canada is 3.8 million square miles in area. It is the second largest country in the world, covering nearly half the North American continent. There are five major geographical regions.

The Appalachian region in the east includes the Atlantic Provinces and part of southeastern Quebec, and consists of rounded hills and undulating plains.

The St. Lawrence Lowlands are an area of fertile, low-lying land bordering the Great Lakes and St. Lawrence River in southern Quebec and Ontario.

The Canadian Shield is an area of very ancient rock covering about 1.8 million square miles centred on Hudson Bay, extending west and north from the Atlantic Ocean to the Arctic Ocean. It is a region of rounded hills, numerous lakes and muskeg (swamp). The Shield contains a wealth of minerals.

The Interior Plains extend from the Gulf of Mexico to the Arctic Ocean. In Canada, the Shield forms their eastern limit and the Cordilleran region their western limit. In the southern part of the Prairie Provinces, the Plains are unforested and are devoted largely to a grain-growing economy. North of the Prairies, the Plains are forested. The rocks of the Interior Plains contain very important deposits of oil, gas and potash.

The Cordilleran region is a strip of mountainous terrain about 500 miles wide that includes most of British Columbia and the Yukon and part of western Alberta. The Canadian Rockies and the Mackenzie Mountains form its eastern ranges; in the west are the St. Elias and Coast Ranges. Between these mountainous areas are rugged plateaux.



## **WATER**

Canada has over 15 per cent of the world's known fresh-water volume. Fresh water forms over 7.6 per cent of the total area of the country.

Four of the five Great Lakes lie partly in Canada.

Some of the largest lakes situated entirely within Canada are Great Bear (12,275 square miles), Great Slave (10,980 square miles), Winnipeg (9,465 square miles), and Athabasca (3,120 square miles).

The St. Lawrence River and the Great Lakes are one of the world's great waterways, and carry deep-sea shipping more than 2,280 miles from the Atlantic Ocean into the heart of the country.

The longest river in Canada is the Mackenzie (2,635 miles), which flows into the Arctic Ocean.

## **CLIMATE**

Canada's climate is greatly influenced by its mountain ranges, plains and water surfaces.

The mountain ranges of the Cordilleran region prevent humid Pacific air from reaching the interior, and also prevent the westward flow of cold Arctic air from reaching the West Coast.

The central plains of the North American continent form a corridor for the flow of warm air north from the Gulf of Mexico and cold air from north to south and east. This air movement creates sudden and drastic weather changes in Canada's interior.

The large water surfaces in Central and Eastern Canada (Hudson Bay and the Great Lakes) produce considerable modification in the climate.

Canada's lowest official temperature reading was -81°F., recorded at Snag in the Yukon Territory in February 1947. The highest official temperature reading was 115°F. recorded at Gleichen, Alberta, in July 1903.

## **ATLANTIC PROVINCES**

The combined area of the Atlantic Provinces — Newfoundland, Nova Scotia, New Brunswick and Prince Edward Island — is 208,148 square miles, 5.5 per cent of the total area of Canada.



### **NEWFOUNDLAND**

Area: 156,185 square miles

Population: 516,000

Capital: St. John's

The long arm of Labrador on the eastern boundary of Quebec belongs to the Canadian Shield; the island of Newfoundland is a continuation of the Appalachian Highlands. The highest point on the mainland is 5,160 feet and, on the island, 2,672 feet. The island's surface dips generally east and northeast, with rugged coasts in the south and east, fringed with islets. Peninsulas, bays, lakes and river basins on the island all lie in a northeast to southwest direction. Fresh water covers about 13,140 square miles of the province.

The temperature is moderate, with frequent high winds. Precipitation is heavy and nearly constant, with rain or snow on an average of 207 days a year at St. John's. The island has a yearly average of 45-55 inches.

Fish, particularly cod, is Newfoundland's best-known resource. Off the coast of Newfoundland lies the world's most extensive fishing-ground, the Continental Shelf.



Prince Edward Island





There are an estimated 33,862 square miles of productive forest land, mainly on the island, which support a thriving pulp and paper industry.

Labrador contains most of the province's large deposits of iron ore, and many other minerals. It also possesses vast water-power resources. Newfoundland's soil suffers from acidity and much of it is rocky. Total occupied farm land is only 0.05 per cent of the island's land area.

#### NOVA SCOTIA

Area: 21,425 square miles

Population: 765,000

Capital: Halifax

The coast is bold and rugged, with excellent harbours. The Atlantic upland is a distinctive feature of the province, consisting of five detached fragments of uniform upland surface separated by lowlands and fertile valleys. There are many rivers and lakes.

The continental climate is somewhat moderated by oceanic influences on the prevailing west and north-west winds from the continent. Precipitation is about 50 inches annually.

Coal is the most important mineral resource. Nova Scotia has many other mineral deposits, including gypsum, barite and salt.

Forests cover almost 80 per cent of the province, and there is considerable water power, from which is generated 23 per cent of the province's electricity. From the Atlantic, the province obtains many varieties of fish, and it ranks first among the provinces in the value of its catch.

The most notable agricultural region is the Annapolis Valley, with its vast apple orchards. About 14 per cent of the total land area is occupied farm land.

#### NEW BRUNSWICK

Area: 28,354 square miles

Population: 623,000

Capital: Fredericton

New Brunswick has low, rounded hills and rolling uplands of moderate altitude. In the south and east the land lies close to sea level; in the north and west it rises in places to over 2,000 feet. Much of the soil is rocky, and arable land is scarce. There are many rivers. Saint John is an ice-free port.

The interior of the province has a continental climate, with intense heat and cold. On the coast, the climate is more temperate as a result of the maritime influences. Precipitation is ample and constant, amounting to about 44 inches a year.

The largest portion of New Brunswick's production (44.5 per cent) comes from manufacturing. The construction industry follows, with 25.3 per cent.

Although the soil is mainly unsuited to agriculture, a generous rainfall supports forests that cover 86 per cent of the area of the province. Forest industries account for 7.7 per cent of New Brunswick's production.

Other resources, in the order of their importance, are mining, electric power and fishing.

#### PRINCE EDWARD ISLAND

Area: 2,184 square miles

Population: 110,000

Capital: Charlottetown

The crescent-shaped island is 145 miles long and from three to 35 miles wide. Its irregular coastline has large bays, long inlets, high cliffs and sandy beaches. The land is low and rolling; its highest elevation is only 450 feet above sea level.

The island is sheltered from the Atlantic by Nova Scotia and Newfoundland, and is therefore free from sudden extremes of temperature and from fog. Its waters are warmer in summer than those of neighbouring provinces. The average precipitation is about 43 inches.

The climate and soil are well suited to mixed farming, and about 66 per cent of the province is occupied farm land. Potato-growing and dairying are the main agricultural activities.



The fishing industry suffers from the lack of harbour facilities, as there are only one or two readily accessible harbours on the north shore.

The island's fine weather, beaches, fishing and scenery are natural resources that attract many tourists and provide a substantial income.

**CENTRAL PROVINCES**



Autumn hillside, Matapédia, Quebec



**QUEBEC**

Area: 594,860 square miles

Population: 6,004,000

Capital: Quebec City

There are three geological regions:

The St. Lawrence Lowlands, constituting a low-lying plain traversed by the St. Lawrence River, contains most of the populated area, industrial centres and fertile farm land.

The Appalachian region extends south of the St. Lawrence River between Quebec City and the interna-



tional boundary, and includes the Gaspé Peninsula. It contains mountains and plateaux. Agriculture, chiefly in the form of dairy farming, is confined mainly to the valleys, the uplands being forested.

The Canadian Shield covers four-fifths of the province, forming an arc around Hudson Bay. Its area is 470,000 square miles, most of which is rocky and covered with coniferous forest. Only 5 per cent of the area is arable, most of this land being in the clay-belt east of Lake Abitibi.

There are no areas of great altitude, though the Laurentians, a division of the Canadian Shield north of the St. Lawrence Valley, rise to 3,000 feet, and the Torngat Mountains on the Labrador border reach 4,500 feet. South of the St. Lawrence, the extension of the Appalachians reaches a height of 3,000-4,000 feet. With its many lakes and rivers, the province has 71,000 square miles of water. The St. Lawrence River is a major inland waterway, and the life of the province is concentrated along its banks.

The climate is varied. In the north and north-western parts of the province it is cold and stable; in the south it is more temperate but subject to sudden changes. Precipitation is nearly constant throughout the year, ranging from 40 inches or more in the St. Lawrence Valley to 15 inches in the north.

Mining is Quebec's most important primary industry. Many metals have been mined for several decades; recently, huge quantities of iron were found in central Quebec. The Gaspé produces copper and most of Canada's asbestos is located in the Eastern Townships.

Hydro-electric power ranks second as a primary resource; there is more installed and potential water-power than in any other province.

Quebec's forests provide 37 per cent of Canada's pulp and 45 per cent of its paper production.

Quebec is second only to Ontario in industrial development, with many thriving industries.

Agriculture is centred in the fertile St. Lawrence

Valley. Its importance has declined in recent years with increased industrial development.

## ONTARIO

Area: 412,582 square miles

Population: 7,567,000

Capital: Toronto

Northern Ontario lies within the Canadian Shield, and consists mainly of rocky forested country. There are patches of land suitable for cultivation, consisting of clay soil mixed with sand. A third of southern Ontario lies within the Shield; the rest of the region is underlain by limestone and shale, and the soil is of excellent arable quality. The highest elevation in the south is only 1,700 feet.

The climate is continental, with great variation in temperature. In the south, precipitation exceeds 35 inches a year; north of the Great Lakes it is about 29 inches.

Ontario has over 165,000 square miles of productive forest.

The province contains Canada's richest farm land and produces 30 per cent of the country's cash receipts from farming operations. Intensive mixed farming is carried on — dairying and livestock-raising, and the growing of tobacco and vegetables and fruits of all kinds.

Mining is of great significance. Most of Canada's cadmium, calcium, cobalt, magnesium, nickel, salt, silver and uranium — as well as much of its copper and gold — is mined in Ontario.

The Great Lakes are a major source of freshwater fish.

Electric power has been a prime factor in the development of Ontario's extensive industrial complex, particularly in the regions bordering the St. Lawrence River and the Great Lakes.

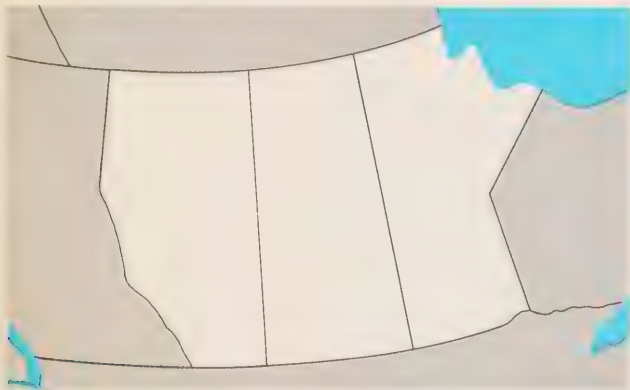
Most of the conveniently located water power has been used and in recent years thermal power has become more important. It now accounts for 43 per cent of the province's installed generating capacity and



includes Canada's first full-scale nuclear-power station at Douglas Point.

## **PRAIRIE PROVINCES**

The Prairie Provinces (Manitoba, Saskatchewan and Alberta) cover 758,000 square miles, or about 20 per cent of Canada's area. The greater part of the three provinces consists of the Interior Plains, which are covered with grass in the south and wooded in the north. The Precambrian Shield, a rocky expanse dotted



with rivers, forest and muskeg, covers much of northern Manitoba and Saskatchewan. Western Alberta lies in the foothills and eastern ranges of the Rocky Mountains.

### **MANITOBA**

Area: 251,000 square miles

Population: 978,000

Capital: Winnipeg

Most of the province is of limited elevation, the highest point being 2,729 feet. The freshwater area is 39,225 square miles. The northern three-fifths of the province lies within the Precambrian Shield.

Manitoba has continental extremes of heat and cold, ranging from  $-50^{\circ}\text{F.}$  in winter to  $90^{\circ}\text{F.}$  or more in summer. Snowfall is less than in Eastern Canada. Precipitation averages 18 inches a year.

The primary resource is land; in the southwest the soil supports valuable crops of wheat. Other farm products are livestock, dairy products, barley, eggs, flaxseed and poultry.

About 49 per cent of the province is forested, and nearly half this area produces marketable timber.

Rich mineral deposits have been found in the Shield, particularly nickel and copper.

### **SASKATCHEWAN**

Area: 251,700 square miles

Population: 948,000

Capital: Regina

The northern third of the province lies within the Precambrian Shield. The southern part is a rolling plain. The freshwater area is 31,518 square miles.

As in Manitoba, the climate is continental; extremes of temperature as high as  $100^{\circ}\text{F.}$  and as low as  $-50^{\circ}\text{F.}$  are not uncommon. The average annual precipitation is 15 to 20 inches, half of which occurs during the summer.

Land is the main resource. Over 40 per cent of the province is tillable, and over 16 million acres are planted to wheat.

There are valuable mineral deposits, with oil the principal product.

A prosperous potash industry has recently been established.

### **ALBERTA**

Area: 255,285 square miles

Population: 1,584,000

Capital: Edmonton

The northern half of the province has many rivers, lakes and forests, with broad expanses of prairie country. The southern half contains fertile wheatland and rolling park-like terrain, as well as the mountainous region that forms part of the Rockies and their foothills.

The average yearly precipitation is from 15 to 20 inches. The warm Chinook wind from the southwest



can cause the temperature to rise as much as 80° in a single day, turning snow to vapour.

The province has little water-power, owing to the gentle slope of the land, but energy is available from important deposits of petroleum, natural gas and coal.

Alberta produces about 70 per cent of Canada's oil and 81 per cent of its gas, and is the source of about 42 per cent of the country's native coal.

The industry next in importance is agriculture.

### BRITISH COLUMBIA AND THE TERRITORIES



About 30 per cent of the province consists of farm land that supports large crops of wheat and huge herds of livestock.

Forests cover more than 62 per cent of the province's surface.

#### BRITISH COLUMBIA

Area: 366,255 square miles

Population: 2,116,000

Capital: Victoria

Most of this province contains mountains and plateaux. The Rockies in the east (highest peak Mount Robson, 12,972 feet) and the Coast Mountains in the west (highest peak Mount Waddington, 13,260 feet) traverse the province from south to north. The highest peak in B.C. is Mount Fairweather (15,300 feet) in the St. Elias Mountains on the border of Alaska. In the south are a number of elongated and relatively narrow valleys, such as the Okanagan Valley, in which agriculture thrives.

The winds from the Pacific Ocean are warmed by the Japanese Current. Rainfall, varying regionally from 10-115 inches annually, is heavy on the coast in winter; but the interior, shielded by the Coast Range, is dry. Although extreme temperatures occur in the far north of the province, the mean temperature elsewhere ranges from 25°F. to 60°F.

Over 73 per cent of British Columbia is forested, and almost four-fifths of this area produces marketable timber. The province is Canada's largest producer of lumber and possesses a sizeable pulp and paper industry.

Though there is relatively little cultivable land, dairying and fruit-farming are important.

Fish, particularly the several varieties of Pacific salmon, is a valuable resource; the province ranks second in Canada in value of its catch.

In metal production British Columbia ranks fourth among the provinces. Its most important metals are copper, oil, molybdenum, zinc, natural gas and lead.

## THE YUKON

Area: 207,076 square miles

Population: 16,000

Capital: Whitehorse

This territory consists of elevated plateaux and mountains lying within the Cordilleran region. Its highest peak, Mount Logan (19,850 feet), is also the highest in Canada.

Temperatures vary greatly, owing to the influence of the relatively warm Pacific Ocean and the cold Arctic Ocean. Though extremes of  $-81^{\circ}\text{F.}$  and  $95^{\circ}\text{F.}$  have been recorded, the mean monthly temperature ranges in January from  $-8^{\circ}\text{F.}$  to  $0^{\circ}\text{F.}$  and in July from  $57^{\circ}\text{F.}$  to  $60^{\circ}\text{F.}$  Precipitation is low, averaging 10-17 inches a year.

Minerals provide most of the territory's income. The most important are asbestos, copper, lead, silver, zinc and gold.

Another significant natural resource is the substantial fur crop.

Water-power potential is great.

## NORTHWEST TERRITORIES

Area: 1,304,903 square miles

Population: 33,000

Capital: Yellowknife

The Northwest Territories cover more than a third of Canada, and include the Arctic archipelago. Much of the region is low-lying but, in the northern Arctic islands, the land rises above 9,500 feet. There are over 51,000 square miles of fresh water in these territories, including the Mackenzie River and Great Bear and Great Slave Lakes. There are vast expanses of muskeg and, north of the tree-line, of barren tundra.

Summers are often warm below the tree-line, but farther north the climate is arctic. Winters are extremely cold, but snowfall is relatively light.

Minerals are the chief resource, and include zinc, lead, gold, silver, oil and copper.

Furs, fish and forests also produce considerable income.

Moraine Lake in the Rocky Mountains





# THE PEOPLE

Canada's estimated population as of January 1, 1970, was 21,260,000.

Over two-fifths is of British stock. French-speaking descendants of the original French colonists constitute about 30 per cent. The rest are of other origins.

Because the French retained their language, culture and traditions after the British conquest of Quebec, French Canada has a distinct cultural life of its own. Most French-speaking Canadians live in Quebec, but there are also many in other parts of the country, notably New Brunswick, Ontario and Manitoba.

The English-speaking population has increased mainly by immigration from the British Isles and the United States. More than 3.6 million are of Scottish and Irish descent; many others are descended from the thousands of American colonists who moved into Canada at the time of the American Revolution (1776-1783).

The early European immigrants to Canada, other than those of French and British origin, settled mainly in the Prairie Provinces; more recently they have settled in all the provinces. The third largest ethnic group in Canada are the Germans. Other large groups are the Ukrainians, Italians, Scandinavians, Netherlands and Poles.

The native peoples of Canada, the Indians and Eskimos, comprise only 1.2 per cent of the population. There are 237,000 Indians, 74 per cent of whom live on government reserves occupying nearly 6 million acres. Canada's 16,000 Eskimos live in the Northwest Territories, northern Quebec and Labrador.

About 75 per cent of Canada's population lives in urban areas concentrated within 100 miles of the United States border.

Farmers' market, Kitchener, Ontario



Eskimo child, Tuktoyaktuk, Northwest Territories



Highland and  
Acadian dancers,  
Cape Breton Island



# HISTORY

Canada was first inhabited by Asian tribes believed by archaeologists to have migrated across the Bering Strait many thousands of years ago. The descendants of these people are today's Eskimos and Indians.

The name "Canada" is believed to have originated with its first inhabitants, since the Huron-Iroquois Indians used the word *kanata* to describe a settlement. The term is thought to have been picked up by European discoverers, who changed it to its present spelling.

The story of modern Canada began more than 465 years ago, when a Genoese navigator, John Cabot, claimed a large portion of the Atlantic seaboard in England's name, though no settlement occurred at that time.

Cabot was followed by Jacques Cartier, who erected a cross on the Gaspé Peninsula in 1534. The following year he sailed up the St. Lawrence River to the Indian settlements of Stadacona (on the site of today's Quebec) and Hochelaga (Montreal).

The true founder and settler of French Canada, however, was the French explorer Samuel de Champlain, who, impressed by the rich furs bartered by friendly

Changing the Guard at Fort Henry, Ontario

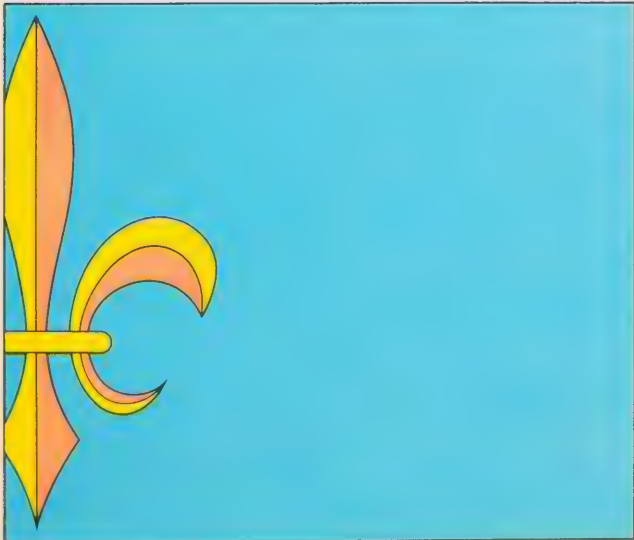


Indians he encountered, established between 1604 and 1634, tiny settlements of French pioneers along the Bay of Fundy and along the shores of the St. Lawrence at Quebec and Trois Rivières.

British attempts at settlement in Canada occurred as early as 1628 in Nova Scotia and Newfoundland.

Following the years of early settlement, both French and English pioneers lived off the land and engaged in the fiercely competitive fur trade. The rough land tracts they occupied were granted to them by their respective home governments; the furs they trapped or bartered for with the Indians were sent to France and England, where government-chartered companies reaped large profits.

Throughout the remainder of the seventeenth century and the eighteenth century, most of the territory eventually to be known as Canada was discovered, explored and mapped for future development. The Great Lakes and the Prairies, the Rocky Mountains and Pacific Coast, James Bay and the Canadian Arctic were all traversed or reached by the adventurous explorers of two centuries ago.



La Compagnie Franche de la Marine, Montreal





Seventeenth century settlement of Sainte Marie, reconstructed



Canada's political shape, after a century of conflict between the rival settlers, the political ambitions of the parent nations and the critical Seven Years War, began to emerge from the dust and smoke over the Plains of Abraham in 1759, where a battle was fought that resulted in the total conquest of the colonies by the British.

The Treaty of Paris, signed in 1763, placed New France under British sovereignty, though it permitted the French to retain their religion.

The American Revolutionary War of the 1770s, with the birth of an independent nation south of the Great Lakes and the St. Lawrence River, was an event as important for future Canadians as for the new citizens of the United States of America.

For, despite the overtures of the leaders of the Revolution and a march on Montreal by American forces, both French and English colonists in the north chose British sovereignty instead of the political independence conceived by their southern neighbours. British North America, partly French, partly English, was born.

For the ensuing 50 years, the colonies comprising British North America — Upper and Lower Canada (Ontario and Quebec), New Brunswick, Prince Edward Island and Nova Scotia — developed materially, and their populations increased. First came the Loyalists from the newly-created United States in the early 1780s to settle in Ontario and the maritime colonies; next came thousands of immigrants from Britain and Northwest Europe to accept offers of free land and supplies.

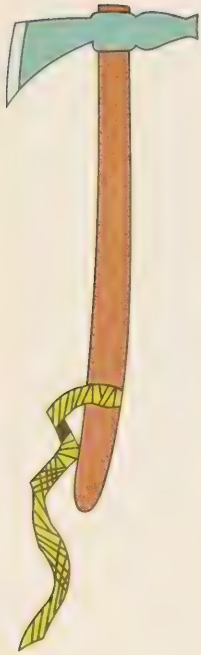
Agriculture and forestry eventually surpassed the fur trade in importance and were developed to the stage where the settlers could import manufactured goods in exchange for flour and lumber. Roads and canals were built; cities, towns and villages developed; religious and educational institutions flourished. The foundations for political evolution from colonialism were established.

Several important developments hastened the union of the colonies into a young nation in 1867. Among these were:

Upper Canada Village, Ontario







- The political uprisings of 1837 in both Upper and Lower Canada, by means of which a maturing citizenry, which had developed a rough land and fought for it, made known its needs and achieved the right to responsible government and a greater say in the political management of the new country;
- the end of the American Civil War, which left in existence large U.S. forces that it was feared might be directed against British North America in reprisal for British aid to the Confederacy;
- the expansion of the American West and the slower settlement of the Canadian territories west of the Great Lakes, prompting the development of rail communications and the feeling among Eastern political leaders that a federation of the whole country must be achieved if the West was to be saved from encroachment and the economic potential of the new country developed.

The British North America Act of 1867 created a new Canada, embracing four provinces—Ontario, Quebec, Nova Scotia and New Brunswick. It provided for a federal union and for the parliamentary system of government and an elected House of Commons, including the chief executive officer, the Prime Minister, and his Cabinet. Six other provinces eventually entered Confederation, the latest being Newfoundland in 1949.

The advent of the twentieth century brought with it millions of new settlers, an influx of foreign investment capital, financial and industrial development and the emergence of a steadily growing manufacturing industry.

The West became known as the “bread-basket of the world”, and agriculture became specialized. The discovery of gold, nickel, silver and a score of other ores revealed Canada as one of the world’s great storehouses of natural resources.

From 1914 to 1918, Canada’s contributions in men and material to the Allied victory earned important international recognition both economically and politically.

Economically, the country’s iron-and-steel industry, its shipbuilding industry, its new aircraft industry, its vast networks of communications (railways, highways, waterways, telegraph, telephone, wireless, etc.), all came into full play, and the young country took its first step towards modern industrialization.

Politically, as a country whose military forces fought with such gallantry throughout the war, Canada was invited to take a separate place at Versailles and was one of the original members of the League of Nations. Following the Imperial Conference at London in 1926, attended by Britain’s senior Dominions, and the enactment of the Statute of Westminster in 1931, Canada became a completely autonomous nation so far as its domestic and international policies were concerned.

Following the severe economic hardships of the Thirties and the outbreak of the Second World War, which Canada entered on its own initiative, the nation again proved, through its manpower, its resources and abilities, to be both a tough fighting ally and a strong arsenal in the defence of freedom from political tyranny.

At the close of the war, Canada ranked third in naval strength and fourth in air-power among the Allies, and had contributed \$2,250 million in mutual aid to its comrades-in-arms.

Canada’s history for the 20 years following the end of the Second World War is the story of valuable aid to less fortunate countries, of further sacrifice in the Korean conflict and of numerous contributions to peace-keeping operations throughout the world.

At home, it is the story of remarkable growth in primary and secondary industry, of rich new finds of oil, natural gas and many new minerals, of advances in science, culture and education, and in the ever-challenging task of achieving national unity without submerging the cultures of the peoples who helped build the nation.

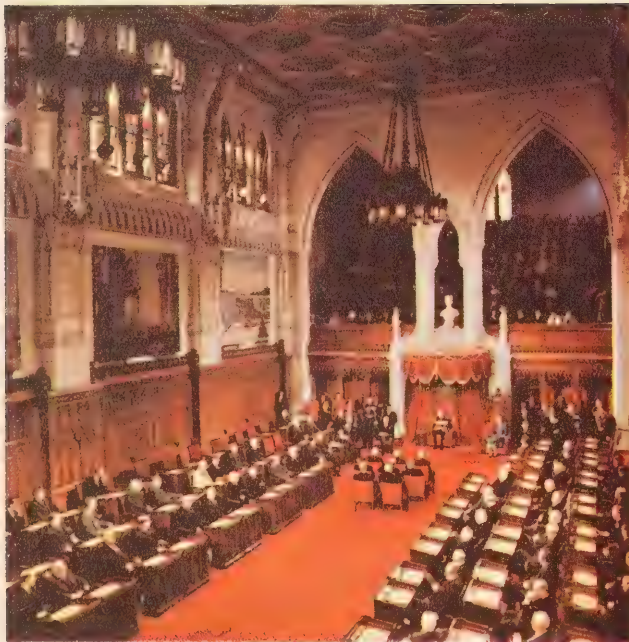
The sharpened logs of its palisade protected Sainte Marie from Iroquois attack





# GOVERNMENT

Opening of Parliament, Senate Chamber



## FEDERAL

Canada has a parliamentary system of government, established with the adoption of the British North America Act of 1867, which states "there shall be one Parliament for Canada, consisting of the Queen, an Upper House styled the Senate, and the House of Commons".

Queen Elizabeth II, as Queen of Canada, is Head of the Canadian State. (With the emergence of the Commonwealth of Nations in 1931, Canada, like several other original senior partners such as Australia and New Zealand, chose to retain the same parliamentary structure it adopted in 1867.) The Queen's representative in Canada is the Governor General, who is appointed on the recommendation of the Prime Minister, generally for a five-year period.

The House of Commons and the Senate constitute the legislative arm of the Canadian Government. The judiciary, which consists of the Supreme Court of Canada, the Exchequer Court, and several minor courts appointed by the Governor General, is independent of both Houses of Parliament.

The 264-member House of Commons, which includes the Prime Minister, his Cabinet colleagues and members of his party, and members of opposing parties, is an elected body. The term of office is a maximum of five years, but an election may be called earlier, at the discretion of the Prime Minister.

Four political parties are at present represented in the House — the Liberal Party, the Progressive Conservative Party, the New Democratic Party, and Le Ralliement des Cr ditistes.

By tradition, the leader of the party winning most seats in the House is asked by the Governor General to form the Government and thus becomes Prime Minister. He selects his Cabinet, which is the executive arm of the Government, from elected members of his party.

The Cabinet Ministers head the various government departments, which are staffed by civil servants administering the affairs of the nation. National policy is formulated by the Cabinet, but its decisions must have

the support of the majority of elected members of the House before becoming law.

The head of the party receiving the second largest number of votes in a federal election officially becomes Leader of the Opposition in the House. It is the responsibility of the Opposition party, and all other Members of the House of Commons, to examine all actions of the Government and criticize those with which they disagree.

Approval or disapproval of proposals, generally in the form of bills introduced by the Government and sometimes by private Members, is determined in the House by vote. When the Cabinet (i.e. the Government) loses the confidence of the House, it must either resign or request a dissolution from the Governor General and go to the people in a general election.

The Senate, or Upper House, consists of 102 members appointed on a regional basis by the Governor General on the recommendation of the Prime Minister. The Senate may initiate minor legislation that does not involve expenditure of public funds. The Senate is required to examine, pass or reject all legislation sent up from the House of Commons. Senators retire at the age of 75.

All Government bills are read three times in both the House of Commons and the Senate before becoming legislation or law. If a bill passes the House of Commons, it may be altered or rejected by the Senate. However, important measures cannot be held up indefinitely by the Upper House. All bills are given Royal Assent by the Governor General.

The Canadian Constitution, establishing the Government of Canada and the framework within which the federal and provincial governments share their respective responsibilities, is not incorporated in a single written document. It is rather a combination of enactments, beginning with the British North America Act of 1867, of statutes and orders in council and, more significantly, the adherence to parliamentary customs and practices inherited from the British system, upon which Canada's parliamentary government was modelled.

The major responsibilities of the Federal Government at Ottawa are the control of the nation's defences and foreign policy, trade and commerce, currency and banking and criminal law.

## **PROVINCIAL**

There are ten provincial governments in Canada, each headed by a lieutenant-governor and consisting of an elected legislative assembly. All provincial governments have a unicameral legislature.

Provincial governments are responsible for important matters such as education, working conditions, property laws and health. Within each province, elected municipal governments deal with local affairs. Each province has its own series of courts, ranging from magistrates' courts to the provincial superior court.

Lieutenant-governors represent the Crown, and are generally appointed for five-year terms by the Governor General on the recommendation of the Prime Minister.

## **TERRITORIAL**

Both the Yukon and the Northwest Territories are represented in the House of Commons, and both have a considerable degree of local self-government.

The Yukon government comprises a Commissioner, appointed by the Federal Government, and a locally-elected Legislative Council of seven members. The government of the Northwest Territories is also headed by an appointed Commissioner and a twelve-man Council, seven of whom are elected and the remainder appointed by the Federal Government.

More autonomy is being granted to the Territories and many functions, formerly the exclusive responsibility of the Federal Government, are gradually being assumed by the governments of the Yukon Territory and Northwest Territories.



# INTERNATIONAL RELATIONS



Member of Canadian UN contingent  
in Cyprus

As a leading middle power, Canada is engaged in the continuing search for peace and international well-being, in the struggle for better social and economic conditions among less fortunate peoples through technical and financial assistance, and in the pursuit of wider and freer international commerce.

The bases of Canadian foreign policy are its membership in the Commonwealth, the United Nations and the North Atlantic Treaty Organization, and its relations with the United States.

Responsibility for the conduct of Canada's international relations rests primarily with the Secretary of State for External Affairs and his ministry, the Department of External Affairs.

Canada's first diplomatic mission, the Canadian Legation (now Embassy) at Washington, was opened in 1927. Today Canadian interests are represented abroad by 89 embassies, 26 high commissioners' offices, 13 consulates general, 1 honorary consulate general, 8 consulates and 13 permanent missions to international organizations. As the national capital, Ottawa plays host to 79 embassies and 19 offices of high commissioners, many of which have consular or trade offices in other parts of the country.

Canada is a senior partner and a major participant in Commonwealth affairs. The present-day Commonwealth has evolved from the small group of British Dominions which joined with Britain to form such an association in 1931 to an imposing family of 27 sovereign states, covering roughly a quarter of the earth's surface and representing about 755 million people of many colours, creeds and languages.

Within this global family, Canada is involved in active consultation and co-operation in such projects as the Colombo Plan, the Canada-West Indies Aid Program and the Special Commonwealth-Africa Aid Program. Scholarships, student and teacher exchanges and military training are arranged under Commonwealth auspices.

Today, a nation's defence policy is inseparable from its foreign policy. Thus, under the North Atlantic Treaty Organization (NATO), of which it was a founding member in 1949, Canada has major defence commitments through contributions of sea, land and air personnel, as well as military equipment.

Also within the framework of NATO, Canada and the United States are linked by the North American Air Defence Command (NORAD) for their mutual protection.

Apart from Canada's defence contributions to NATO, it shares (with 14 other members) in the continuing exchange of information, opinions and plans regarding political, economic, cultural and scientific developments affecting the group. Canada has contributed nearly \$2 billion in equipment and training to other NATO countries.

Through the Organization for Economic Co-operation and Development (OECD), Canada shares with other NATO partners in discussions of trade and economic policies.

As a charter member of the United Nations, Canada for 25 years has played a prominent role in the affairs of the world organization.

Canada has participated in every peacekeeping operation undertaken by the United Nations since 1948 — in Kashmir, Palestine, Korea, the Congo, West Irian, Yemen and Cyprus, and is one of the members of the Conference of the Committee on Disarmament (CCD).

Canada's long-standing friendly relations with the United States are unique. Both nations share a common heritage and similar standards of living, yet both grew to their present status in separate ways.

Mutual defence is of vital importance to both nations, and, since 1940, a Permanent Joint Board on Defence has existed to co-ordinate and develop continental defence.

Because the two countries occupy the greater part of the northern half of the Western Hemisphere, many problems have arisen over boundary waters, canals and related matters, and, since 1909, an International Joint Commission has functioned successfully to help resolve difficulties to the satisfaction of both nations.



Canadian signaller in the Congo



# FOREIGN TRADE AND COMMERCE



Freighter leaves  
Toronto Harbour

In total value of trade, Canada normally ranks sixth, after the United States, West Germany, Britain, France and Japan. On a population basis, it usually ranks eighth.

Over 63 per cent of Canada's imports are fully-manufactured goods. Over half of Canada's imports enter duty-free. Exports, on the other hand, are mainly semi-manufactured products, finished products, raw materials and food products. These classifications account for almost two-thirds of total exports.

The total value of Canada's foreign trade has advanced each year since 1958. Since 1961, exports have exceeded imports in all but one year. Canadian trade with all countries in 1969 reached \$28.6 billion, and there was a trade surplus of \$240 million.

The main components of Canadian export trade, by stages of manufacture are finished products, followed

## Principal Domestic Exports

Commodity <sup>(1)</sup>	1967	1968	1969
Motor vehicles	1,739,161	2,671,856	3,503,290
Newsprint paper	955,261	989,831	1,125,801
Wood pulp and similar pulp	543,433	627,874	753,488
Lumber	509,415	656,301	700,604
Copper, ores and alloys	494,187	611,559	534,631
Crude petroleum	397,875	446,413	535,780
Aluminum, ores and alloys	416,778	462,684	494,389
Wheat	641,878	684,469	472,703
Nickel, ores and alloys	433,278	506,463	451,391
Machinery (except farm)	243,558	295,347	368,916
Iron ores and concentrates	383,063	443,202	333,131
Aircraft and parts	313,611	369,427	324,535
Iron and steel (including alloys)	251,551	339,711	300,731
Fish	216,241	234,533	252,348
Asbestos, unmanufactured	172,397	192,896	216,275
Communication equipment	122,099	194,384	200,259
Whisky	141,514	158,253	189,074
Farm machinery	194,298	168,549	180,499
Zinc, ores and alloys	167,064	177,231	179,460
Natural gas	123,664	153,752	176,188

(1) Commodities ranked by value of exports in 1969.

## Principal Imports

Commodity <sup>(1)</sup>	1967	1968	1969
Motor vehicles and parts	2,168,363	3,000,856	3,645,880
Machinery, non-farm	1,149,780	1,173,568	1,442,371
Steel, all types	345,880	325,434	460,968
Aircraft, and parts	361,064	437,034	400,781
Communication equipment	288,212	313,262	393,511
Crude petroleum	355,416	372,586	393,453
Electrical equipment	258,844	278,838	324,946
Scientific equipment	250,708	267,457	321,361
Fruit and fruit products	210,092	230,174	249,648
Wearing apparel and accessories	165,225	211,172	247,721
Printed matter	189,483	204,690	233,935
Other petroleum and coal products	198,315	215,984	223,524
Plastic materials	147,813	173,202	202,836
Tractors and parts	233,508	196,660	194,401
Aluminum, including ores, concentrates, scraps and alloys	160,079	173,484	187,914
Farm equipment	184,834	156,532	156,721
Wood, lumber and plywood	110,294	122,379	148,395
Cotton, including yarn, thread and fibres	155,469	127,830	133,084
Meat and meat preparations	62,780	68,321	123,317
Vegetables and vegetable products	107,069	116,267	121,964

(1) Commodities ranked by value of imports in 1969.

by fabricated products, crude materials and food products.

The pattern of imports tended to follow a somewhat similar pattern over the past few years. Transportation and communication equipment and machinery account for over 45 per cent of the total imports. Motor vehicles and parts top the list of leading commodities.

The United States is Canada's principal trading partner, each country being the other's best customer. Britain is second, and together these two countries participate in almost four-fifths of Canada's international trade. The next largest market for Canadian goods is Japan, followed by West Germany and the Netherlands.

The order of the first five most important suppliers of Canadian imports is the United States, Britain, Japan (clothing and electrical goods), West Germany (cars) and Venezuela (petroleum).

The primary function of the federal Department of Industry, Trade and Commerce is to promote external trade through its head office in Ottawa, its six regional Canadian offices and a corps of trade commissioners stationed around the world.

The Trade Commissioner Service has more than 191 trade commissioners stationed at 75 posts in 52 countries. Knowing the economic conditions in these territories, they provide information on potential markets, foreign competition, import contracts, tariff provisions, shipping facilities and labelling regulations. They also assist in securing reliable agents for Canadian firms and provide a point of contact for visiting businessmen.

The Canadian Government Travel Bureau, an agency of the Department of Trade and Commerce, is responsible for encouraging tourist travel to Canada and co-ordinates tourist promotion outside Canada. It also undertakes extensive advertising campaigns, and handles approximately 2 million inquiries annually from potential visitors to Canada. Tourist offices are operated in 14 cities in the United States, as well as London, Paris, Frankfurt, Mexico City, Tokyo, The Hague and Sydney.

Loading grain, Quebec





# PRIMARY INDUSTRIES

## AGRICULTURE

Agriculture is Canada's second most important primary industry, although it employs less than 7 per cent of the country's labour force. Occupied land exceeds 174 million acres and the total number of farms is 431,000. Farming is highly commercialized, mechanized and specialized.

Types of farming include grain and other field crops, dairying, livestock and poultry raising, fruit and vegetable growing, and the cultivation of specialties such as tobacco, honey and maple products, and fur farming.



The farm commodity produced in greatest abundance, owing to the combined influence of climatic conditions, plant-breeding programs and an efficient grading system, is wheat. In 1969, the production of this grain was 684 million bushels. The general agency in Canada for the sale of all grains, including wheat, is the Canadian Wheat Board, a Crown corporation.

Livestock and dairy enterprises together yield 57 per cent of the farm cash receipts. Wheat accounts for 21 per cent. Ranching prevails in the West, and native grasslands sustain almost 5.8 million head of beef cattle.

The most important fruit grown in Canada is the apple. Commercial orchards are found primarily in Nova Scotia's Annapolis Valley, Ontario's Niagara Peninsula and the Okanagan Valley of British Columbia. The 1968 apple crop was estimated at 20 million bushels.

Next to apples, strawberries, peaches and grapes are Canada's most important commercial fruits. Production fluctuates from year to year, with the average value around \$25 million. Canning and processing industries have been developed in fruit-growing areas.

There are over 2,500 fur farms in Canada, producing mostly mink and chinchilla. Today the value of pelts taken from animals raised in captivity surpasses the value of wildlife pelts. Production of all furs in 1968 numbered 6.1 million pelts and was valued at close to \$37 million.

Experimental farms and agricultural colleges play important roles in the development of Canada's very diversified and specialized agricultural industry. Government departments of agriculture, agricultural colleges and science faculties in some universities provide many services to Canadian farms through research establishments, inspection and grading services, health protection for animals and the operation of production and marketing programs.





## FORESTRY

Canada's forests, covering 1.7 million square miles, 960,000 of which are productive, extend in an unbroken belt 600 to 1,300 miles wide from the Atlantic to the Pacific. British Columbia, Ontario and Quebec, in that order, contain the largest stands of marketable timber.

There are approximately 150 varieties of tree native to Canada, 20 per cent of which are softwoods, such as spruce, Douglas fir, hemlock, cedar, pine and balsam fir.

Canadian forestry consists of woods operations, wood industries (including lumber), pulp-and-paper industries and wood-using and paper-using industries. Forest-products output in 1967 amounted to 3.8 billion cubic feet of solid wood (i.e. logs, pulpwood, poles, fuelwood, etc.). The forests are the source of over 20 per cent of all Canadian exports.

Trucking logs, Vancouver Island



The manufacture of pulp and paper was Canada's leading industry for many years and now stands first in total wages paid and total capital invested; it ranks second among all industries in value of shipments and exports. Canada stands second to the United States as the world's largest pulp-producer.

The value of the industry's annual shipments totals more than \$2.3 billion, and pulp-and-paper exports exceed \$2.0 billion annually. The industry employs 74,000 workers. During 1967, there were in Canada 136 mills producing pulp or paper, 78 of them producing both commodities. The largest individual pulp-and-paper mill in the world is located in Canada.

The industry has newsprint shipments of 8.2 million tons, three-and-one-half times that of any other country, and provides over 42 per cent of the world's newsprint needs. Newsprint is the nation's second largest export. In addition, Canadian mills have a highly-developed production of fine paper, wrapping paper, tissues, paper-board and other cellulose products.

Saw mills and planing mills employ over 47,000 workers, and their annual value of shipments is \$960 million. Other wood industries employ 43,000 workers, and their annual shipments are valued at \$716 million. Some saw-mills can cut up to half a million board feet in a single shift. Exports of lumber are valued at \$650 million annually.

Federal and provincial departments of forestry maintain regional laboratories, field stations and experimental areas on Crown lands to carry out research in forest management, forest-fire control, disease and pest control, chiefly in the interest of forest conservation. There are eight fine schools of forestry at universities across Canada, and technical forestry training at the post-secondary level is offered at six technical institutes.

# FISHERIES

Commercial fishing, which dates back nearly 500 years, was Canada's first primary industry. Today, fishing is the nation's fifth-ranking primary industry. Canada's annual catch amounts to approximately 2.4 billion pounds, with a market value of over \$330 million.

Eighty thousand commercial fishermen are employed in fishing operations. Exports in 1969 totalled approximately \$254 million.

On the world market, about 60 per cent of the total demand is for fresh, frozen or cured fish; 18 per cent is for canned products and 15 per cent for shellfish.

On the Atlantic coast, lobster, cod, scallops, herring and flounders, in that order, are the most important fish. On the Pacific coast, salmon, halibut and oysters are the major species. The development of new fish-freezing plants in the Atlantic Provinces since 1963 has increased their proportion of the total value of the national catch to about 70 per cent.

In May 1964, the Canadian Government established a 12-mile exclusive fishing-zone along Canada's coast-line. The Federal Government has full legislative jurisdiction over coastal and inland fisheries for their protection, conservation and development.

Canada has entered into a number of international treaties, particularly with the United States, for the protection and preservation of marine fisheries. Among these are the International Northwest Atlantic Fisheries Convention and the International Pacific Salmon Fisheries Convention.



Codfish hauled from fishing-boat, Nova Scotia







## MINING

The mining industry in Canada is four centuries old. Copper, iron and silver were first discovered in 1604, coal in 1672 and iron in 1667. The first iron smelter, La Compagnie des Forges, was established in 1737 in Quebec. The Geological Survey of Canada, which enjoys a world-wide reputation, was established in 1843.

The discovery of gold in the Fraser River in 1858 attracted widespread interest. As the California gold strike of 1849 waned, miners flocked north to Canada to discover gold in the Yukon River in 1869. In 1896, the famous Klondike discovery was made, and thousands of prospectors moved into the Yukon.

The mining industry in Canada ranks first among primary industries in both the net and aggregate values of output. Raw and semi-processed mineral products amounted to 27 per cent of the nation's exports in 1969.

Mineral production — metallic, non-metallic, fuels and structural materials — in 1969 was valued at \$4.7 billion. Canada leads the world in the production of asbestos, nickel, silver and zinc, and is second in the production of gypsum, molybdenum, potash and elemental sulphur. Canada supplies 70 per cent of the Western world's nickel requirements and produces almost 500 million pounds a year.

Canada also produces 40 per cent of the world's asbestos, 23 per cent of the zinc, 16 per cent of the silver, 15 per cent of the molybdenum, and 14 per cent of the potash. It is the third largest producer of aluminum. The largest aluminum smelter in the world, located at Arvida, Quebec, has a capacity of 373,000 tons a year. One of the most modern plants in North America for the production of aluminum sheets is located at Kingston, Ontario. Its annual capacity is 35,000 tons.

Crude-oil production in 1969 was 408 million barrels. Proved reserves of crude oil in Canada from the beginning of 1970 were 10.5 billion barrels, or the equivalent of 23 years of production at the current rate. Proved natural-gas reserves will last 33 years at the present production rate.

Iron-ore deposits now under exploration will make Canada in the near future a major iron-exporting nation. From 1944 to 1967, production increased from 0.6 million tons to 41.3 million tons valued at \$1.9 million and \$455 million respectively.



## ELECTRIC POWER

Canada occupies second place in the world's *per capita* production of electricity. The total electrical energy generated in Canada in 1969 amounted to 190 billion kwh. At the end of 1969, the total installed generating capacity exceeded 40 million kw.

Seventy-eight per cent of Canada's present power needs are met by energy generated from water-power. Since this resource is renewable, it is one of the nation's permanent natural assets. Canadians enjoy some of the lowest electricity rates in the world. The rate for domestic and farm service over the past five years has averaged 1.4 cents a kwh, compared to 2.2 cents a kwh in the United States.

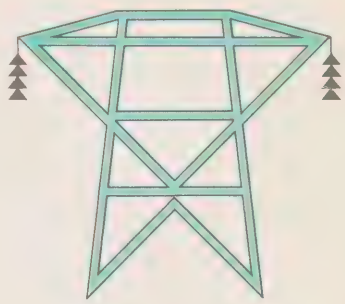
The use of nuclear fuels for producing electric power has been the subject of intensive research in Canada and, in 1962, the country's first commercial nuclear electric power became available at Rolphton, Ontario. Coal, oil and natural gas are also used to produce thermal-electrical energy. In this domain, Ontario produces over 49 per cent of the total.

In undeveloped water-power resources, Quebec is Canada's richest province and British Columbia is its second richest. Quebec is also first in the amount of water-power developed. Ontario is second and British Columbia third. It is interesting to note that Quebec's entire hydro capacity is installed on rivers in the St. Lawrence River basin.

The Beauharnois plant on the St. Lawrence River, which has a generating capacity in excess of 1.6 million kw, is Canada's largest plant. An ambitious project on the Manicouagan and Outardes Rivers in Quebec involves the harnessing of the two streams by the construction of a series of seven new hydro plants. The entire complex will permit the eventual installation of almost 6 million kw, of which 1.5 million kw are now in use. British Columbia has constructed a plant on the Peace River that will have a capacity of 2.3 million kw.

The Columbia River Treaty, under which Canada and the United States will jointly develop the waters of

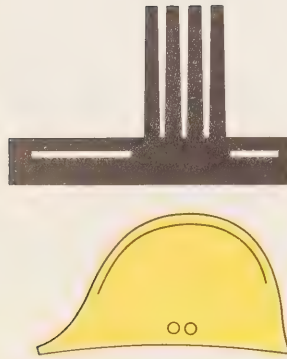
the Columbia River to provide large new supplies of low-cost hydro-electric power and important flood-control benefits for both countries, was ratified in 1964.



Canada will receive half the power benefits accruing in the United States from the regulation of 15.5 million acre-feet of water stored in Canada.



# SECONDARY INDUSTRIES



At the time of Confederation, approximately 15 per cent of the workers in the population were employed in manufacturing and half in agriculture. Today less than 7 per cent are employed in agriculture and almost a quarter in manufacturing. Early manufactures were textiles, iron work, furniture, farm implements, flour, food and shoes.

The very rapid rate of industrial growth during the last 25 years of the nineteenth century had a massive impact on Canadian manufacturing. But it was the enormous demand of the Second World War on industry as a whole that caused the Canadian economy to undergo a surge of growth that reached its peak in 1944. The value of shipments of the manufacturing industries in that year was over two and a half times that of 1939.

Since then, the discovery of large supplies of petroleum and natural gas and the construction of pipelines for their distribution, the discovery of large-scale deposits of iron ore and base metals, the growth of population, and the demand for consumer goods, have all contributed to a diversified expansion of manufacturing unequalled in any period.

Canada is one of the leading manufacturing nations of the world. Manufacturing employs one of every four Canadians in the labour force, approximately the same proportion as in the United States. There are more Canadians employed in manufacturing than in farming, fishing, forestry, mining and construction combined. In 1967, the selling value of factory shipments reached \$39.0 billion. Salaries and wages reached \$9.3 billion, and there were 1.7 million employees.

Ontario is recognized as one of the world's major industrial areas, and, in 1967, accounted for 54 per cent of the total Canadian value of shipments in the manufacturing industries. Quebec accounted for 28 per cent and British Columbia for 8 per cent.

Motor-vehicle manufacturing today ranks as Canada's largest industry in gross value of shipments. Factory production began in 1904 and, by 1969, the country's assembly-lines were producing almost 1,036,000 cars



Alberta gas-plant



Paper-making, La Tuque, Quebec



and 317,000 commercial vehicles. The total number of vehicles in use at the beginning of the same year was almost 7.9 million. Exports of Canadian-made vehicles and parts amounted to \$3.5 billion and imports to \$3.6 billion.

Canada ranks twelfth among the steel-producing nations: its production, since the end of the Second World War, has increased fivefold. The 1969 production was 10.3 million tons.

The primary textile, knitting and clothing industries in Canada employ almost 200,000 people, one of the largest employers in the country. Over 85 per cent of the companies in these industries are controlled by Canadians and their shipments in 1967 were valued at over \$2.9 billion.

The primary textile industry is a decentralized, small-town industry with most of its 1,000 plants located in Quebec and Ontario. There are two textile industries in the country. One makes or processes man-made and natural fibres and produces many consumer products. Its principal function is to supply the cutting or garment industry, which is the second of the textile industries. There are more than 2,300 clothing factories producing goods worth more than \$1.2 billion a year. The value of shipments of women's clothing is slightly higher than the value of shipments of men's clothing. Production of leather footwear in 1969 was 49.0 million pairs.

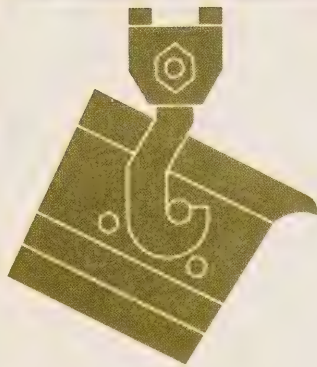
The electrical products industries date from 1881. Today they rank seventh in the value of shipments, which were worth approximately \$2.3 billion in 1967 and employed over 128,000 people.

The construction industry employs about 600,000 people. Expenditures on new or repair construction work in 1969 were estimated at \$13.3 billion.

Machine-operator in  
Hamilton, Ontario, foundry



Molten slag, Sudbury, Ontario





# TRANSPORTATION

Transportation is essential to the survival of a country like Canada, exceeding 3,200 miles in breadth and almost 3,000 miles in depth from its southern border to the northern tip of Ellesmere Island; and the successful development of its vast transportation systems chiefly accounts for Canada's current status as a prosperous industrial nation.

Most prominent among these systems are the railways. Of these, two transcontinental systems, the government-owned Canadian National Railways and the Canadian Pacific Railway Company, provide 88 per cent of all rail transportation. There are approximately 62,000 miles of track throughout the country, and the railways today carry about 43 per cent of the ton-miles of freight but less than 3 per cent of passenger traffic.

The modernization of Canada's railway systems in recent years is attested by the complete changeover from steam to diesel locomotion, electronically-operated freight yards, data-processing systems for operational, accounting and statistical purposes, the construction of new rail lines into the more remote mining areas in Canada's North, and the elimination of certain uneconomical lines and services.

The importance of road transportation in Canada is emphasized by the fact that there are about 525,000 miles of roads and streets, the vast majority of which are surfaced; there are almost 7.9 million motor vehicles registered in Canada, and the average mileage driven by Canadian motorists annually exceeds 8,880. The automobile accounts for approximately 83 per cent of all passenger-miles travelled each year.

Passenger jet-liner in flight





Trans-Canada Highway and CPR, B.C.



Freight and passenger services on Canadian roads and highways have expanded considerably in recent years, owing to the rapid growth in urban population and the expansion of the trucking industry from rural and local services to transcontinental services, and north and south across the Canada-United States border.

More than 1.6 million trucks and road tractors operate on Canadian roads; and about 65 million passengers use the numerous interurban and rural bus services annually.

Canada has many new roads and expressways, but the most important nationally is the 4,860-mile Trans-Canada Highway, completed in 1962, which makes it possible to drive from St. John's in the east to Victoria in the west.

Water transportation, the earliest form of conveyance in Canada, still commands a most important position in a nation possessing three sea-coasts and thousands of navigable miles of rivers and lakes.

Canada possesses 25 large ports, each of which handles over two million tons of cargo a year. The St. Lawrence Seaway, a 2,280-mile water route from the Atlantic to the heart of the continent, has been operating since 1959, and approximately 63 million tons of iron ore, coal, wheat and other commodities are transported every season through its series of 17 locks, with a total elevation from east to west above sea level of 602 feet.

The National Harbours Board administers six of Canada's major ports. All Canadian waterways, including canals, lakes and rivers, are open on equal terms to ships of all countries, except for those taking part in the coastal trade.

Of growing importance among Canada's transportation systems are its modern airlines. Beginning in a small way in the 1920s with exploration flights to the northern bushlands and airmail flights on short runs, Canada's civil aviation industry today occupies an important position in the world of transportation.

Fast, powerful jet-liners of the two major lines—Air Canada, owned and operated as a Crown company, and Canadian Pacific Airlines, a subsidiary of the Canadian Pacific Railway Company—now carry passengers across the continent in from seven to eight hours. Some 10,000 registered civil aircraft operate in and out of approximately 1,610 airports, seaplane bases, "heliports" and military airfields. Canadian air-carriers transport some 9.3 million passengers and over 194,000 tons of freight yearly.

In addition to domestic lines and services, including many serving important northern routes, Canada's international airports serve as landing and departure bases for scores of foreign-operated lines. Montreal is the headquarters of the International Civil Aviation Organization and the International Air Transport Association — the world's two most important aviation bodies.

Newly added to the field of large-scale transportation in Canada are over 62,000 miles of oil and gas pipelines of varying diameter, snaking out from the western plains in all directions to feed crude oil to refineries as much as 2,000 miles from the source and carrying natural gas to industries and private homes across the continent.

The oil and gas pipelines were constructed mainly from 1950 on and carry their cargoes over the Rocky Mountains to the west coast, south into the United States and east to the industrial centres along the shores of the Great Lakes and the St. Lawrence River.

Roughly 1.8 million barrels of crude oil are moved each day by pipeline and as much as 4.2 billion cubic feet of natural gas are carried in the same way every year to provide energy for gas utilities industries, which, in turn, distribute it to more than 1.8 million consumers, from New Brunswick to British Columbia.



# RESEARCH AND DEVELOPMENT



Solar furnace  
uses sun's rays  
to create heats  
like those of  
atomic blasts

The organization of research in Canada is unique because of the country's enormous area and small and unevenly distributed population. Furthermore, the fact that Canada borders three oceans and possesses vast northern regions makes it particularly fitted for many types of research.

Research in Canada is carried on at four levels: by the Federal Government, by provincial governments, by universities and by industry.

The federal departments that administer the development of natural resources have the longest history of scientific research. Some provincial governments have research councils that concentrate mainly on applied research directed toward the development of provincial resources and local industry.

In the federal sphere of research, many areas of science and technology, particularly those that aid the secondary industries, fall within the scope of the National Research Council, which was established in 1916. Beginning with three research divisions, in chemistry, physics and biology, the NRC has expanded to comprise ten divisions and two regional laboratories in science and engineering. Of 2,832 NRC employees, 720 are professional scientists and engineers.

Under federal jurisdiction also are Atomic Energy of Canada Ltd., the Defence Research Board, and the Medical Research Council. The Defence Research Board conducts investigations into materials, armaments, special weapons, telecommunications, aeronautics and Arctic problems. This Board, the NRC and the Medical Research Council make extensive financial grants to universities and university students.

Atomic Energy of Canada Ltd., a Crown company, is concerned with nuclear research and development, the design and construction of reactors for nuclear power, and the production of radioactive isotopes and associated equipment, such as cobalt-60 beam-therapy units for the treatment of cancer.







The company's major plant and laboratories are located at Chalk River, Ontario, where research is conducted by 300 professional scientists and engineers and 350 technicians. Research at Chalk River is principally concerned with atomic-nuclei structure and the generation of electricity by nuclear power.

Universities have, of recent years, greatly increased their research programs and facilities. Research conducted by universities and reported in professional journals is truly encyclopedic and reflects both a high degree of specialization and an extraordinary variety of interests. Financial support for university research comes from governments, industry and private foundations.

Canadian firms are today well aware of the value of research, and many companies, especially the larger ones, have substantial research establishments of their own.

Specialized research projects are varied. The Continental Shelf Project in the Arctic, which is at present the subject of intensive study, is expected to yield detailed and accurate information on the physical and chemical composition of the waters of the Arctic Ocean, the nature of the Shelf, and the behaviour of glaciers, sea-ice and climate in the recent geological past.

Canadian scientists also pay particular attention to the earth's magnetism, since Canada plays, as it were, the role of host to the Magnetic Pole. The Northern Lights (*aurora borealis*) are also related to the earth's magnetic field, and scientists are studying the electrical nature of the atmosphere, where the phenomenon is produced, by measuring the upper atmosphere with new rocket techniques.

Since the Canadian coast-line is one of the longest in the world, scientists are vigorously working on oceanographic research programs. Oceanographic measurements are made on cruises by specially-equipped ships and include the determination of ocean currents, water temperature and salinity and plankton content.

Geological research is important because the Canadian Shield is one of the most intricate and richest rock formations on earth. The geological sciences have a long tradition in Canada and include not only mineral exploration but the dating of rocks by radioactive methods, etc. The origin of a number of very ancient so-called craters in Northern Canada is the subject of much study and debate.

There are also research programs in meteorology which involve the use of radar to study storm conditions and the use of rockets to forecast weather.

Aviation research to aid in opening up the North plays a leading role in developing aircraft with short take-off and landing characteristics. The Canadian-designed *Otter*, *Beaver* and *Caribou* aircraft are internationally known as being particularly well-suited to wilderness flying. Research engineers are now working on designing a reliable and economical vertical take-off and landing aircraft, thus foreshadowing the possibility of doing away with runways completely.

In addition to their participation in the above-mentioned research projects, the beneficial results of which are shared by many other countries, Canada's scientists play an important part in international research projects.

Canadian scientists took a significant part in the International Geophysical Year (IGY) and are also playing a similar role in the programs of the International Year of the Quiet Sun (IQSY), particularly in cosmic-ray studies in the World Magnetic Survey.

Canada collaborates very closely in atomic research with the United States, Britain and other countries. Canada and the U.S. also exchange technical data freely.

Most medical research is done by universities and affiliated hospitals and institutions. Outstanding contributions have been made to neuro-chemistry and bio-chemistry by the Montreal Neurological Institute at McGill University and by the Banting and Best Depart-

ment of Research at the University of Toronto, both of which have international reputations. The Connaught Medical Laboratories in Toronto and the Institute of Micro-biology in Montreal are well known for their studies of viruses. The Allan Memorial Institute in Montreal has established itself as a leader in research on mental illness.



# EDUCATION AND THE ARTS

Education is compulsory in Canada to all children from the age of 6 to 14 or 16, depending on the provinces where they live, and is free until the completion of secondary-school studies. Most schools are co-educational, and vary in form from the one-room school-house to ultra-modern suburban structures.

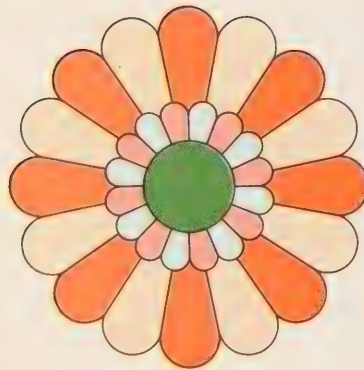
Under the terms of the British North America Act, responsibility for education is vested in the provinces. There is no federal department of education, but the ten provincial departments exercise exclusive jurisdiction over education in their respective provinces.

In some provinces separate schools are operated by Catholic or Protestant minorities. Relatively few students attend private schools; in the English-speaking provinces, the proportion is 2 per cent, and in Quebec 5 per cent.

In spite of the multiplicity of educational systems and authorities, co-operation has produced more uniformity than might be expected.

Canada has about 216 universities and colleges, with a full-time enrolment of 306,000 students. Some of these institutions receive provincial and federal grants; others are supported by religious denominations and private endowment.

Because university fees have risen in recent years, students often take part-time or summer employment. In 1964, the Federal Government established a \$50-million program of student loans. A student may borrow up to \$5,000 during his undergraduate years or graduate years at a Canadian university or other institution of higher learning.



Scene from *Richard II* at Stratford, Ontario

Some of the larger universities have more than 10,000 students and, with the rapidly increasing enrolment, all face complex expansion and financial problems.

The Canada Council, a federal body created in 1957 to encourage the development of the arts, humanities and social sciences, has made considerable sums available to artists and artistic undertaking. During 1968-69, the Council dispensed \$8,800,000 in various forms of assistance to the arts alone. Several of the provinces and many municipalities also provide financial aid to artistic enterprises.

The remarkable flowering of the arts in Canada in recent years has been due, among other influences, to the widespread interest in Canada's centennial, in preparation for which concert halls, theatres, cultural centres and conservatories have been built across the country.

The most magnificent of these came as a belated centennial event when the National Arts Centre opened in Ottawa in 1969. This \$46-million complex contains a 2,300-seat opera house, an 800-seat theatre, an experimental studio and a chamber-music salon. The Centre serves as a focal-point for touring Canadian artistic groups and for companies from abroad. It also provides resident attractions, including a 45-piece orchestra.

Theatre is flourishing in Canada. In addition to the many amateur groups, of which the six best compete each year in the Dominion Drama Festival, an increasing number of professional companies are performing in their home centres and on tour in Canada and abroad. These include the Neptune Theatre (Halifax), l'Estoc (Quebec), le Rideau Vert, the Comédie Canadienne and le Théâtre du Nouveau Monde (Montreal), Workshop Productions and Theatre Toronto (Toronto), the Manitoba Theatre Centre (Winnipeg), the Citadel (Edmonton) and the Vancouver Playhouse. The most important of the Canadian drama schools is the National Theatre School, which provide courses in both English





Student cellists, Banff School of Fine Arts



and French and is held at Stratford, Ontario, during the summer and in Montreal during the rest of the year.

Quebec, Montreal, Toronto, Winnipeg, Edmonton and Vancouver have professional symphony orchestras and the Atlantic Symphony Orchestra was founded in 1969, combining the Halifax and New Brunswick Orchestras. The Montreal and Toronto orchestras have represented Canada abroad with great success. Two chamber groups, the McGill Chamber Orchestra of Montreal and the Hart House Orchestra of Toronto, are well known in international musical circles. Most other Canadian cities have amateur symphony orchestras or chamber groups.

Interest in orchestral music is growing among young Canadians, and the National Youth Orchestra is highly regarded abroad. The summer camp of les Jeunesses Musicales at Mount Orford, Quebec, and the Banff School of Fine Arts are also developing young Canadian musicians.

Canada possesses three professional ballet companies of international repute — the Royal Winnipeg Ballet, the National Ballet of Canada (Toronto), and les Grands Ballets Canadiens. These companies are making an important contribution to the musical and artistic development of the nation.

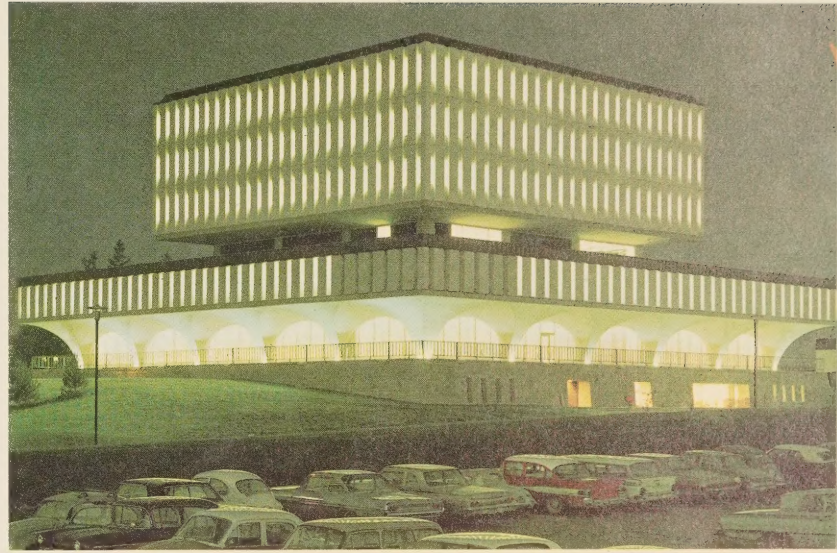
Canada's leading opera companies are le Théâtre Lyrique de Nouvelle-France (Quebec), the Vancouver Opera Association and the Canadian Opera Company (Toronto). None of these companies, however, can operate all year round. Operas are produced occasionally by other organizations, notably the Montreal Symphony Orchestra.

A number of music and drama festivals take place each year, the most famous of which is the Stratford Shakespearean Festival at Stratford, Ontario. Other noteworthy festivals are held annually at Montreal, Vancouver, Niagara-on-the-Lake, Ontario and Guelph, Ontario.

Canada's most original contribution to the arts



Library, Waterloo University, Ontario



has probably been in painting, which, from the pioneer work of the Group of Seven to that of numerous contemporary artists, has manifested a vigour hardly surpassed by the artistic output of any other nation of comparable size. Of first importance in providing a public and a market for Canadian painters and sculptors have been the purchasing and exhibiting policies of the National Gallery in Ottawa. The Federal Government also buys Canadian works of art for many of its buildings.

Since the Second World War, the literature of Canada has acquired international stature. Many literary prizes are won each year by Canadians. Besides the many books published in Canada, the works of numerous Canadian authors are now being published abroad.

The radio and television networks of the Canadian Broadcasting Corporation have performed an invaluable service not only in bringing the various Canadian arts before a national audience but also in producing original films and dramas designed specifically for broadcasting.

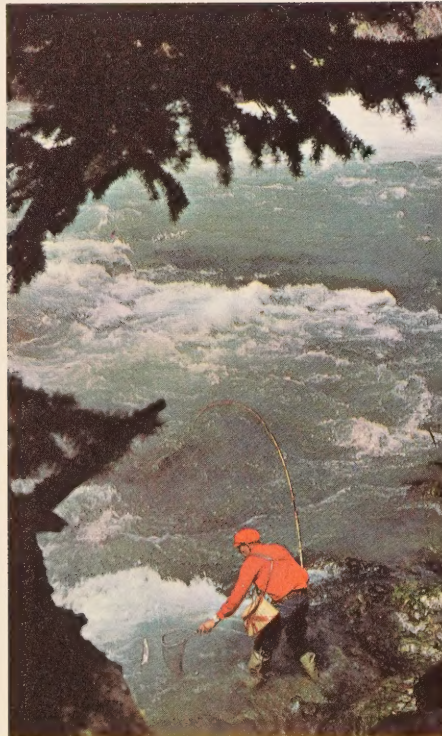
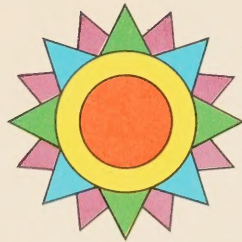
Montreal is the fourth largest producer of television programs in the world, and is first in the production of French-language programs.

Like the CBC, the private radio and television stations throughout Canada carry classical music and drama for that part of their audience that has no taste for a steady diet of light entertainment.

The contribution of the National Film Board to the popularizing of the arts has been only slightly smaller than that of the CBC, and its original productions have probably been more extensive.



# RECREATION



Fishing in the Rockies

Variety is the source of Canada's popularity with vacationers — variety of climate, of scenery, of people. The Canadian seasons come in different guises to different parts of the country, and arrive at different intervals.

To the greater part of Canada winter brings cold-weather sports and pastimes of all kinds—skiing, skating, curling and ice-hockey, among others. Winter carnivals are popular, the biggest and best-known being that held each year in Quebec City. Sports fans who prefer the spectator's role are entertained by the finest professional hockey teams in the world.

In the late spring and summer, thousands of people move to cottages by lakes and streams, while other thousands swim, fish, sail, motor and golf. Later in the summer, Canada's second main spectator sport, gridiron football, opens its training season, for the next four months or so exerting a hypnotic spell over a large section of the population. Spring and summer are the seasons for open-air festivals and shows. Tourists in Montreal stroll through the Botanical Gardens; visitors to Nova Scotia attend the Annapolis Apple Blossom Festival; thousands of people from the United States and other countries flock to the Calgary Stampede, the greatest Wild West show on earth.

Autumn in Eastern Canada is a blazing tapestry of coloured leaves. From east to west, it is the season for hiking and colour photography, football and baseball, and fall fairs everywhere throughout the countryside.

Canada is a land bountifully endowed with natural playgrounds. The Federal Government maintains 24 national parks, with camp-sites and other basic camping facilities, and each province maintains a number of similar parks. In addition, 34 national historic parks and sites are maintained by the Federal Government.



Chuck-wagon race, Calgary Stampede





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